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A REVISION OF THE SOUTH AFRICAN SPECIES OF ORNITHOGALUM L.

By FRANCES M. LEIGHTON.

PART II.

KEY TO THE SPECIES 20-32.*

Flowers yellow or yellowish with a broad median green stripe,
sweetly scented, style excentric in young flowers, seeds
subdiscoid.

Leaves 2—5, opposite.

Leaves flat, spreading 20 *Pearsonii*.

Leaves canaliculate erect or sub-erect at the base, often
encircling the base of the peduncle.

Filaments expanded gradually from the apex to the
base 21 *suaveolens*

Filaments expanded abruptly in the lower half. . . 22 *Muirii*.

Leaves many, arranged in a rosette.

Margins entire.

Leaves terete or sub-terete, flattened or canaliculate
at the base only 23 *polyphyllum*.

Leaves flat or broadly canaliculate, spreading. . . 24 *odoratum*.

Margins coarsely ciliate or muricate 25 *secundum*.

Flowers white, yellowish or fuscous with a brownish median
stripe, style erect.

Leaves many, narrow or filiform, peduncle wiry, seeds
angled.

Leaves 5 cm. or less in length.

Inflorescence lax, few-flowered.

Leaves sinuose, at least in the upper half 26 *tortuosum*.

* Key to species 1—19 appears on p. 87. A final key to all the species will
be published when the several parts are completed.

- Leaves straight or slightly recurved at the apex . . . 27 nanodes.
 Inflorescence dense, many flowered, scarcely taller
 than the leaves 28 Comptonii.
 Leaves 10—20 cm. long, inflorescence tall. 29 epigeum.
 Leaves 1—3, long-ovate or lorate, peduncle fleshy, seeds
 subdiscoid.
 Leaf solitary, pedicels 1 cm. or less in length 30 solitarium.
 Leaves 2 or more, rarely one, if one then pedicels more
 than 1 cm. long.
 Leaf margins crenulate, coarsely ciliate when young . . . 31 crenulatum.
 Leaf margins smooth, finely pubescent when young . . . 32 cinnamomeum

20. **O. Pearsonii** Leighton sp. nov.

Plantae alt. circa 70 cm. *Bulbus* ovoideus, diam. 3—4 cm., tunicis coriaceis. *Folia* 2, lorata, long. 25 cm. vel ultra, lat. 25—30 mm., marginibus hyalinis. *Inflorescentia* multiflora. *Perianthium* patens vel reflexum, flavum vel albidum, viridi-vittatum, segmentis obtusis, subcucullatis interioris barbatis. *Stamina* erecta subaequalia, filamentis basi expansis. *Ovarium* oblongum, stylo longo, stigmate penicillato. *Semina* rugosa, angulata, atra.

Hab. South-West Africa. Great Karasberg, Naruda Süd, *Pearson* in Sladen Mem. Exped. 8225.

Plants 70 cm. or more high. *Bulb* ovoid, 3—4 cm. diam. with leathery outer tunics. *Leaves* 2, lorate, 25 cm. or more in length, 25—30 mm. broad, margins hyaline. *Inflorescence* tall, many-flowered, bearing flowers for more than half the length of the peduncle; pedicels spreading. *Perianth* yellow or whitish with a median green stripe down each segment, segments obtuse, subcucullate, spreading or reflexing 10—14 mm. long, 3—4 mm. broad, three inner segments barbate. *Stamens* erect, subequal, filaments expanded from the middle to the base. *Ovary* oblong, style and stigma together considerably longer than the ovary, stigma distinctly trilobed, penicillate. *Capsule* broad with large angled rugose seeds.

Fl. Jan.

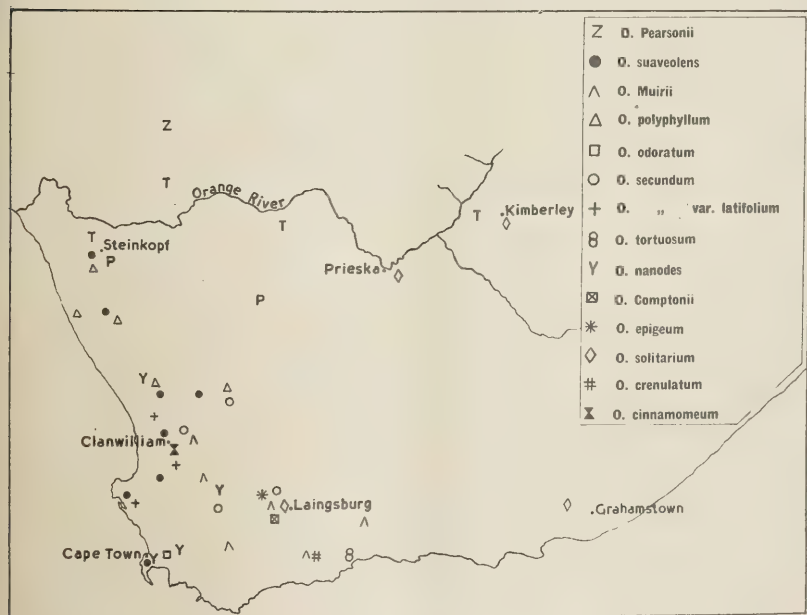
[Fig. 20. Map V.]

This species may prove to be one already described from South-West Africa, but many of the descriptions are very inadequate and it will only be possible to settle the question when the types are available.

21. **O. suaveolens** Jacq. Coll. II, 316; Ic. II, 19, t. 431. Willd. Sp. Pl. II, 122; Roem. et Schultes, Syst. Veg. VII, 523; Kunth Enum. IV, 366; Bak. in Journ. Linn. Soc. XIII, 279; *O. barbatum* Jacq. Hort. Schoenb. I, 47, t. 91; Willd. Sp. Pl. II, 122; Roem. et Schultes, Syst. Veg. VII, 523; Kunth Enum. IV, 366; Bak. in Journ. Linn.

Soc. XIII, 278; *O. albucoides* Thunb. Fl. Cap edit. Schultes, 314; Kunth Enum. IV, 367; *O. Roodeae* Phill. in Fl. Pl. S.A. pl. 75; *Phalangium albucoides* Poir. Encycl. V, 249; *Anthericum albucoides* Ait. Hort. Kew, edit. (i) I, 449; edit. (ii) II, 269; Roem. et Schultes, Syst. Veg. VII, 472; Kunth Enum. IV, 367.

Plants up to 50 cm., usually 20—30 cm. high. *Bulbs* ovoid or globose 2—3 cm. diam., with papery outer tunics. *Leaves* 2—4, opposite, linear, glabrous, juvenile stage often terete or semiterete, but flattening and becoming somewhat channelled down the face and flaccid with age, 10—25 cm. long, 3—20, usually about 10 mm. broad at the base; leaves absent at the flowering time but remains often persisting. *Inflorescence* lax, few—many-flowered, bracts often as long as the pedicels. *Flowers* sweetly scented, open in the morning, closing in the afternoon. *Perianth* bright yellow with a broad green median stripe, segments spreading, oblong, 12—20 mm. long, 4—6 mm. broad, apices obtuse, subcucullate, three inner segments broader than the three outer, barbate. *Stamens* erect, more than half as long as the perianth, filaments yellowish or greenish in colour, all gradually expanded from the apex to the base;



MAP V.

the degree of expansion varies but there is never a lobed or winglike structure. *Ovary* green, ovoid, style and stigma together much longer than the ovary, style slender, deflected to the side, stigma conspicuously penicillate. *Capsule* broad, deeply lobed, seeds black, flattened.

Fl. Sept.—Nov.

Hab. Cape Province. Cape Peninsula: Lion's Head, *Leighton* 299, 394, *Bolus* 8028, *Compton* 15360; Signal Hill, *Penfold* 141; Wilde Vogel Vlei (Imhoffs Gift), *Esterhuysen* 3508. Cape Div.: Visser's Hok, *Barker* 2539; Milnerton, *Levyns* in B.H. 22875. Malmesbury Div.: Bet. Mamre and Melkbosch Rd., *Leighton* 395; near Mamre, *L. Bolus* in B.H. 22876; Mamre Flats, *Compton* 13876; near Darling, *Esterhuysen* 3862, *Bolus* 12893; Top of Botma's Kloof, Riebeeck Kasteel, *Esterhuysen* 6037; Bet. Moorreesburg and Berg River Bridge, *Pillans* 6704; near Moorreesburg, *Bolus* 9985; Langebaan, *Pillans* 6959, *Leighton* in B.H. 22877. Piquetberg Div.: Berg River Bridge, *Lewis* in B.H. 22878; near Sauer, *Barker* 2664, *Leighton* 140; near Berg River (Zout Kloof), *Leighton* 141; Skrik-van-Rondom, *Leighton* in B.H. 21625; Antonies Rivier, *Leighton* 96; Koppie, Het Kruis, *Barker* 2590. Clanwilliam Div.: Bet. Grey's Pass and Graafwater, *Leipoldt* 3251; Graafwater, *Peers* in Nat. Bot. Gdns. 2059/24; Bet. Lamberts' Bay and Graafwater, *Lavis* in B.H. 22879; Clanwilliam, *Thode*, A2144; Pakhuis, *Salter* 7509, *Leipoldt* in B.H. 22880. Van Rhynsdorp Div.: Klaver, *Ross Frames* in Nat. Bot. Gdns. 1218/26; Van Rhynsdorp, *Rood* in Nat. Herb. 22823, 22824 and in Nat. Bot. Gdns. 924/25. Calvinia Div.: Brandkop, *Stokoe* 7678; Nieuwoudtville, *Barker* in Nat. Bot. Gdns. 1749/30. Little Namaqualand. Khamieskroon, *L. Bolus* in B.H. 22881; Steinkopf, *Marloth* 12479.

This species is very variable in the size of the plant, the nature of the leaves, the density of the inflorescence, and in the expansion of the filaments. Further work may indicate which characters are sufficiently stable to be used as the basis of varieties or even species. At present it seems wiser to define *O. suaveolens* as a large and very variable species.

Jacquin published figures of *O. barbatum* (Hort. Schoenbr. t. 91) and *O. suaveolens* (Ic. II, t. 431) which in themselves appear distinct but so many intermediate forms occur that they must be considered as a single species.

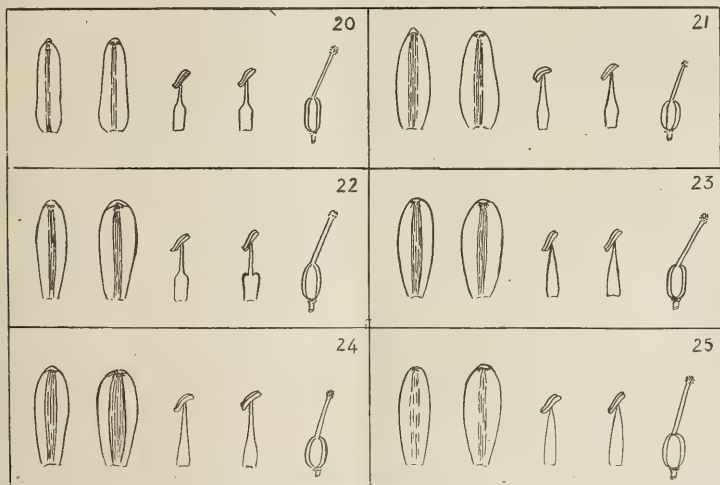
The colouring of *O. Roodeae* is as far as the author can ascertain the only character which separates it from *O. suaveolens* and, since this reddish or purplish colour is observed in other plants growing in the Van Rhynsdorp area (especially the Knechtsvlakte) it is probably due to soil and climatic conditions.

[Fig. 21. Map V.]

22. *O. Muirii* Leighton sp. nov.

Plantae alt. ad 60 cm., saepius 30—40 cm. *Bulbus* globosus, albus. *Folia* 2, linearia, canaliculata. *Inflorescentia* multi- vel pauciflora. *Perianthii* segmenta flava viridi-vittata, oblonga, obtusa, patentia, apicibus subcucullatis, minute barbatis. *Stamina* erecta, filamentis basi expansis, tribus interioribus lobatis. *Ovarium* ovoideum; stylus longus, excentricus; stigma penicillatum. *Capsula* conica; semina atra, planiuscula, semidiscoidea.

Hab. Cape Province. Laingsburg Div.: Whitehill Ridge, *Leighton* 234 (*Type*); Bantams Karoo, *Compton* 12172. Montagu Div.: Koo, *Compton* 3909. Riversdale Div.: Hills near Riversdale, *Muir* 2673, 2676. George Div.: Ganz Kraal, Lang Kloof, *Fourcade* 4702. Ceres



20. *O. Pearsonii*. 21. *O. suaveolens*. 22. *O. Muirii*. 23. *O. polyphyllum*.
24. *O. odoratum*. 25. *O. secundum*. (All figures natural size.)

Div.: Paardekop near Spes Bona, *Marloth* 12534. Clanwilliam Div.: Summit of Sneekop, Cederberg, *Esterhuysen* 7552; Krakadousberg *Esterhuysen* 7484; Top of Nieuwoudt Pass, *Esterhuysen* 8128; Pakhuis, *Esterhuysen* 3176; Lamkraal, *Bolus* 9107.

Plants up to 60 cm. high, usually from 30—40 cm. *Bulb* ovoid or globose, whitish 2—3 cm. diam. *Leaves* 2, linear, channelled down the face, encircling the peduncle at the base, often as long as the peduncle, usually shorter, 6—10 mm. broad at the base, tapering gradually to the apex. *Inflorescence* lax, few—many-flowered. *Perianth* spreading,

flowers opening in the morning and closing in the afternoon, segments yellow with a median green stripe, oblong, 12—15 mm. long, 4—5 mm. broad, apices obtuse, subcucullate, barbate. *Stamens* erect, filaments greenish, all abruptly expanded in the lower half, three inner somewhat broader than the outer with lobed apices to the basal expansions. *Ovary* ovoid; style at least twice as long as the ovary; stigma conspicuously penicillate, style and stigma deflected to one side. *Capsule* broadly conical, deeply lobed; seeds black, flattish, semicircular.

Fl. Aug.—Oct. at lower altitudes, Dec.—Jan. at altitudes of 5—6,000 ft.

[Fig. 22. Map V.]

23. *O. polyphyllum* Jacq. Collect. Suppl. 79; Ic. II, 19, t. 430. Willd. Sp. Pl. II, 123; Roem. et Schultes VII, 524; Kunth Enum. IV, 366; *O. sanguineum* Kunth Enum. IV, 368; *O. tuberosum* Bak. in Fl. Cap. VI, 506; *O. odoratissimum* C. A. Smith Fl. Pl. S. A. pl. 194.

Plants 30—60 cm., rarely about 20 cm., high. *Bulb* ovoid or globose, 2—5 cm. diam., with rough leathery outer tunics. *Leaves* many, erect, linear, terete or semiterete, flattened or somewhat canaliculate at the base, 10—25 cm. long, 4—8 mm. broad, synanthous, though often withered at the apices. *Inflorescence* rather lax, often bearing flowers for about half its length, bracts often as long as the pedicels. *Perianth-segments* whitish or yellow with a median green stripe, somewhat cucullate and barbate at the apex, 12—15 mm. long, 4—5 mm. broad. *Stamens* subequal, filaments lanceolate, somewhat thickened, 8—10 mm. long. *Ovary* oblong, 3—5 mm. long, style 6—8 mm. long, stigma capitate, penicillate, style and stigma deflected to the side. *Capsule* conical. *Seeds* black, flattened, semidiscoid.

Fl. Aug.-Sept.

Hab. Cape Province. Little Namaqualand: Spektakel, *Esterhuysen* 5665, *Compton* 11461; Nabapeep, *Ridgill* in Nat. Bot. Gdns. 3805/14; O'okiep, *Bolus* 6599, *Morris* s.n.; Soebatsfontein, *Compton* 5959; Khamiesberg, *Marloth* 12481; Garies, *Barker* 1920; Bet. Garies and Hondekclip Bay, *Lewis* in Nat. Bot. Gdns. 2054/32, *Leighton* in B.H. 20700; Leliefontein, *Leipoldt* 3862. Van Rhynsdorp Div.: Bet. Bitterfontein and Garies, *Esterhuysen* 5671; Van Rhynsdorp, *Rood* in Nat. Bot. Gdns. 920/25, *Marloth* in Nat. Herb. 3001. Calvinia Div.: Calvinia, *Thode* A1955.

[Fig. 23. Map V.]

24. *O. odoratum* Jacq. Coll. Suppl. 78; Ic. II 20, t. 432; Willd. Sp. Pl. II, 121; Roem. et Schultes, Syst. Veg. VII, 523; *O. suaveolens* Jacq., Bak. in Fl. Cap. VI, 507 (in part).

Plants up to 60 cm. high. *Bulb* globose, 3—4 cm. diam. *Leaves* linear, glabrous, somewhat fleshy, arranged in a rosette, 10—17 cm. long, 10—12 mm. broad, apex subacute. *Inflorescence* slender, lax, many-flowered. *Perianth* spreading, segments yellow with a broad median green stripe, 12—15 mm. long, 5—7 mm. broad, apices subcucullate, three inner segments barbate. *Stamens* subequal, subulate. *Ovary* ovoid, style slender, stigma penicillate, style and stigma deflected to the side in immature stage. *Capsule* up to 15 mm. long and 8 mm. broad at the base. *Seeds* flattish, black, angled or subdiscoïd.

Fl. Oct.

Hab. Cape Province. Stellenbosch Div.: Sandy flats on the Botterlary road, Pillans 9548.

O. odoratum differs from *O. suaveolens* in the form and arrangement of the leaves.

[Fig. 24. Map V.]

25. *O. secundum* Jacq. Coll. Suppl. 79; Ic. II, 20, t. 433. Willd. Sp. Pl. II, 122 (excl. syn. *O. maculatum* Thunb.); Roem. et Schultes VII, 527; Kunth Enum. IV, 369; Bak. Fl. Cap. VI, 506; *Urginea secunda* Bak. in Journ. Linn. Soc. XIII, 222. *Monotassa secunda* Salisb. Gen. 37.

Plants up to 30 cm. high, usually 10—20 cm. *Bulb* globose, 2—4 cm. diam., with tough, blackish tunics. *Leaves* many, arranged in a rosette, erect or suberect, lingulate, often lengthening and becoming lorate, 5—20 cm. long, 1—2 cm. broad, firm in texture, becoming leathery with age, usually disappearing completely at the flowering time, margins conspicuously hyaline with coarse denticulation or ciliation. *Inflorescence* pyramidal, often lengthening in the fruiting stage. *Perianth* yellow with green median stripe, segments oblong 12—15 mm. long, 4—5 mm. broad, apices obtuse, subcucullate, barbate. *Stamens* subequal, usually lanceolate, sometimes rather broadly expanded near the base. *Ovary* ovoid, style slender, twice as long as the ovary, stigma conspicuous, penicillate. *Capsule* short and broad, almost globose when fully developed. *Seeds*, black, flattish, semicircular.

Fl. Aug.—Nov.

Hab. Cape Province. Ceres Div.: Bet. Hottentots Kloof and Sutherland Leipoldt 3327. Laingsburg Div.: Hillandale, Marloth 9840. Clanwilliam Div.: N. of Pakhuis, Esterhuysen 5921A. Calvinia Div.: Botterkloof, Esterhuysen 3189, Compton 9643.

Var. *latifolium* L. Bolus in S.A. Gard. XXIV, 50 (Feb. 1934). *O. odoratum* Andr. Bot. Rep. t. 260.

Hab. Cape Province. Clanwilliam Div.: Between Piquetberg and Clanwilliam, *L. Bolus* in B.H. 20097 (*Type*); Between Clanwilliam and Lambert's Bay, *Lavis* in B.H. 22882. Van Rhynsdorp Div.: Klaver, *Lewis* in Nat. Bot. Gdns. 1858/32, *Marloth* 12549. Malmesbury Div.: Langebaan, *Lewis* in Nat. Bot. Gdns. 2030/32.

This variety differs from the usual form as understood above in having (1) more finely ciliate leaves which are often narrower and (2) taller laxer inflorescences with longer pedicels. [Fig. 25. Map V.]

26. *O. tortuosum* Bak. Fl. Cap. VI, 510.

Plants up to 15 cm. high, growing in clusters. *Bulb* ovoid or globose, about 1 cm. diam. with greyish membranous tunics. *Leaves* many, filiform, canaliculate, usually strongly sinuose, rarely almost straight, up to 5 cm. long, 0.5 mm. broad, margins ciliate when young, glabrescent



26. *O. tortuosum*. 27. *O. nanodes*. 28. *O. Comptonii*. 29. *O. epigeum*.
(All figures $\times 2$).

with age. *Inflorescence* few-flowered, peduncle wiry, bracts membranous, cuspidate from a broad base, shorter than the pedicels. *Perianth-segments* pinkish-white with a median green stripe, 6—9 mm. long, 2 mm. broad, three outer segments subecullate, all minutely barbate at the apex. *Stamens* more than half the length of the corolla, filaments gradually expanded from apex to base, three inner about twice as broad as the outer. *Ovary* ovoid, style and stigma as long as the ovary, stigma papillose.

Fl. Jan.

Hab. Cape Province. Mossel Bay Div.: Mossel Bay, *Salter* in Nat. Bot. Gdns. 1639/37.

[Fig. 26. Map. V.]

27. *O. nanodes* Leighton Journ. S.A. Bot. IX, 113 (July, 1943), (erroneously spelt *nannodes*); *O. pygmaeum* A. V. Duthie, Ann. Stell. Univ. VI, pt. 3, 2.

Plants 10—15 cm. high. *Bulbs* globose, 8—15 mm. diam. with a neck 15—20 mm. long. *Leaves* 6—12, linear, upper surface canaliculate, absent at the flowering time, 10—25 mm. long, 0.5—1 mm. broad, emerging in a rosette-like tuft from the neck of the bulb. *Inflorescence* few-flowered, flowers widely spaced, peduncle and pedicels wiry; bracts 2—6 mm. long apiculate; pedicels 2—3 cm. long, often arcuate. *Flowers* opening in the morning and closing in the afternoon. *Perianth-segments* whitish with a brown median stripe, oblong, 4—6 mm. long, 2 mm. broad, apices obtuse, incurved, barbate. *Stamens* almost as long as the perianth, filaments subequal, expanded gradually but not widely from apex to base. *Ovary* ovoid, style and stigma stout, shorter than the ovary. *Seeds* angled, surface granulate.

Fl. Nov.—Dec.

Hab. Cape Province. Stellenbosch Div.: Stellenbosch Flats, *Duthie* 1505 (*type*). Cape Div.: Ndabeni, Cape Flats, *Salter* 8597. Ceres Div.: N. end of Cold Bokkeveld Mts., *Leighton* 176; Karooport *L. Bolus* in B.H. 22870; Ceres Rd., *Schlechter* 9068. Van Rhynsdorp Div.: near Nieuwerust, *Esterhuysen* 1289; Leeuwfontein, *Pearson* in Sladen Mem. Exped. 3193.

[Fig. 27. Map V.]

28. *O. Comptonii* Leighton sp. nov.

Plantae alt. ad 7 cm. *Bulbus* globosus, albus, diam. 15—20 mm. *Folia* 5—7, canaliculata, glabra vel pilosa, long. 15—25 mm., lat. 1.5—2 mm., marginibus incurvis, setatis. *Inflorescentia* multiflora, globosa. *Perianthii segmenta* patentia. *Filamenta* subulata. *Ovarium* obovoideum. *Semina* angulata, granulata.

Hab. Cape Province. Laingsburg Div.: Karoo Garden, Whitehill, Leighton 269 (*Type*), Compton 3614. Prince Albert Div.: Marchand in Herb. Marloth 10504.

Plants up to 7 cm., usually about 5 cm. high. *Bulb* globose, white, 15—20 mm. diam. *Leaves* 5—7, arranged in a rosette, erect or sub-erect, glabrous or pilose, 15—25 mm. long, 1.5—2 mm. broad, upper surface deeply channelled and margins incurved with a fringe of downward-pointing setae; the leaves usually absent at the flowering time but remains often persisting. *Inflorescence* globose, 6—16-fl. ; pedicels spreading, 1 cm. long. *Flowers* opening in the morning and closing early in the afternoon. *Perianth-segments* spreading, pale pinkish-brown, with a darker median stripe, outer 7—8 mm. long, 2 mm. broad, inner 6.5—7.5 mm. long, 2.5 mm. broad. *Stamens* subulate, 5 mm. high, three inner broader than the three outer. *Ovary* obovoid, narrowed considerably at the base, 3 mm. high, style and stigma slender, together 3 mm. high. *Seeds* black, angulate, granulate.

Fl. Sept.—Oct.

[Fig. 28. Map. V.]

29. *O. epigeum* Leighton Journ. S.A. Bot. IX, 110 (July, 1943).

Plants up to 36 cm. high. *Bulb* oblong-globose, up to 2 cm. diam., produced into a neck. *Leaves* numerous, vaginate at the base, narrow, wiry, up to 20 cm. long and 1 mm. broad. *Inflorescence* up to 30 cm. high, many-flowered. *Bracts* small, cuspidate. *Pedicels* slender, about 1 cm. long at flowering time, lengthening and becoming arcuate as the fruit develops. *Perianth-segments* whitish or cream with a greenish or brown median stripe on the under surface. *Stamens* about half as long as the perianth-segments, three inner filaments more widely expanded than the three outer. *Ovary* ovoid, 3 mm. long, style and stigma together 2 mm. long. *Seeds* black, angulate, rugose.

Fl. Oct.—Dec.

Hab. Cape Province. Laingsburg Div.: Karoo Garden, Whitehill, Compton 12629 (*Type*), 4082. Sutherland Div.: Driefontein, Marloth 9762. Little Namaqualand: Steinkopf, Marloth 13366.

[Fig. 29. Map V.]

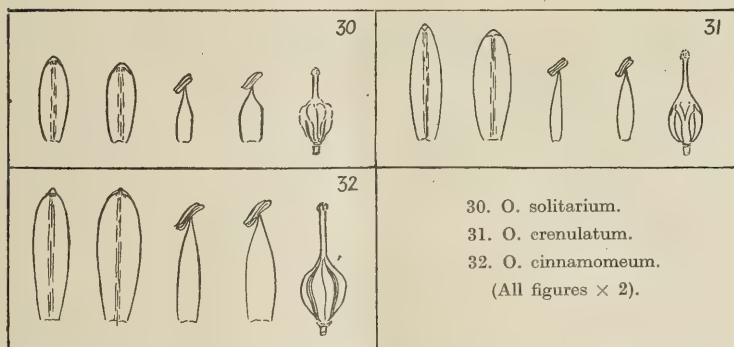
30. *O. solitarium* Leighton nom. nov. vice *O. unifolium* Dyer in Rec. Alb. Mus. IV, 111 (1930) non Retz.

Plants up to 10 cm., rarely more than 5 cm. above the ground. *Bulb* ovoid or globose, 1—3 cm. diam., outer tunics brown, leathery, continued upwards to form the neck 1—2 cm. long. *Leaf* solitary, oblong or lanceolate, glabrous, under surface often purplish in colour, 2—7 cm. long, 9—15 mm. broad, margins hyaline; leaves usually absent

at the flowering time but remains may persist. *Inflorescence* few—many-fld. bracts papillose near the apices, as long as or longer than the pedicels. *Perianth-segments* whitish to brownish-yellow with a median green stripe, oblong 6—7 mm. long, 2—3 mm. broad, apices subcucullate, barbate. *Stamens* nearly as long as the perianth segments, filaments all expanded, 3 inner broader than the outer. *Ovary* ovoid or obconic, deeply lobed, lobes prominently keeled. *Seeds* angular, often compressed and elliptical, surface granulate.

Fl. Sept.—Oct.

Hab. Cape Province. Albany Div.: 6—7 miles from Grahamstown along the Cradock Road, in sand covering shale (Witteberg series), *Dyer* 2196 (*Type*). Laingsburg Div.: Karoo Garden, Whitehill, *Compton* 14654, 14589, *Leighton* 232. Prieska Div.: Prieska, *Bryant*



30. *O. solitarium*.

31. *O. crenulatum*.

32. *O. cinnamomeum*.

(All figures $\times 2$).

831, *Marloth* 13561. Griqualand West, Herbert Div.: Mazelsfontein, *Anderson* in B.H. 18644; St. Clair, *Anderson* 758. Kimberley Div.: Kimberley, *Marloth* 13414; Mauritzfontein, *Acocks*, in *McGreg.* Mus. 5758. Barkly West Div.: Holpan, Kalkveld, *Acocks* 2475, in *McGreg.* Mus. 5061.

[Fig. 30. Map V.]

This species varies in the colouring of the flowers, in the degree of expansion of the stamens and in the nature of the keels or outgrowths of the ovary walls, but the differences are insufficient to warrant splitting it into two species.

31. *O. crenulatum* L. f. Suppl. 198. Thunb. Prod. 62; Fl. Cap. edit. Schultes, 315; Willd. Sp. Pl. II, 118; Roem. et Schultes VII, 529; Kunth Enum. IV, 371; Baker Journ. Linn. Soc. XIII, 278; Fl. Cap. VI, 515.

Plants 5—15 cm. high. *Bulb* ovoid or globose, 15—25 mm. diam.

outer tunics brown coriaceous. *Leaves* 2, patent, oblong, obtuse or subacute, 3—4 cm. long, 10—17 mm. broad, margins crenate, coarsely ciliate when young, rugose with age. *Inflorescence* few- or many-flowered, flowers rather crowded. *Perianth-segments* yellowish below, white above, 7—10 mm. long, apices hooded, 2.5—3 mm. broad. *Stamens* pilose lanceolate. *Ovary* narrowed slightly both at apex and base, deeply lobed, lobes sculptured, slightly canaliculate near the apex. *Capsule* broad, deeply lobed.

Fl. Oct.—Nov.

Hab. Cape Province. Riversdale Div.: Nr. Riversdale, *H. Bolus* in B.H. 22883 (without leaves); sine loc., *K. Muir* in B.H. 22884. Robertson Div.: Robertson, *de Villiers* in Nat. Bot. Gdns. 489/39 (leaves not seen).

O. unifolium Retz is cited as a synonym of *O. crenulatum* by Willdenow, Roemer and Schultes and by Kunth. [Fig. 31. Map V.]

32. *O. cinnamomeum* Leighton. sp. nov.

Plantae alt. ad 30 cm. saepe 10 cm. *Bulbus* globosus, tunicis coriaceis. *Folia* 1—3, longo-ovata, apicibus obtusis, marginibus minute fimbriatis. *Inflorescentia* multiflora, conica. *Perianthii segmenta* albidia et cinnamomea, angusta, apicibus cucullatis, barbatis. *Filamenta* plana, expansa. *Ovarium* obconicum, acute angulatum; stylus cum stigmatibus ovario aequilongo. *Semina* atra, plana, elliptica vel subdiscoidea.

Hab. Cape Province. Clanwilliam Div.: Roadside about 2½ miles S. of Clanwilliam, *Pillans* 9852, in Nat. Bot. Gdns. 639/43 (*Type*); Nardouw, *Stokoe* 8010, 8011.

Plants 10—30 cm. high. *Bulbs* globose 20—35 mm. diam. with leathery tunics. *Leaves* 1—3, long-ovate, 6—9 cm. long, 2—3 cm. broad, apex obtuse, no trace of leaves at flowering time, margin minutely fringed, undersurface purplish in colour. *Inflorescence* many-flowered, conical, peduncle bearing flowers for more than half its length. *Perianth segments* whitish on the upper, cinnamon or brownish on the under surface, 9—10 mm. long, 2—3 mm. broad and barbate at the apex. *Stamens* almost as long as the perianth, filaments gradually but broadly expanded from apex to base. *Ovary* obconic, deeply lobed with distinct ridges on the lobes. *Fruit* a broad, sharply angled capsule with many flat, black, elliptical or sub-discoid seeds.

Fl. Oct.—Nov.

This species is very close to *O. fuscatum* Jacq. but differs in the character of the ovary which is sculptured in Jacquin's figure, and in the nature of the leaves which are broader and prostrate in *O. cinnamomeum*. [Fig. 32. Map V.]